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The Health Of The Chinese In An American City

San Francisco



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The Health Of The Chinese In An American City — San Francisco

Under date of June, 1870, in the Health Officer's report to the Board of Supervisors of the City and County of San Francisco, there appears a letter of protest against the conditions then existing in that section of the city occupied exclusively by the Chinese. It was written at that time " their habits and manner of life are of such a character as to breed and engender disease. . . . The great majority of them live crowded together in rickety and dilapidated tenement houses, Apartments that would be deemed small for the accommodation of a single American are occupied by six, eight or ten Chinese." What changes in these conditions have been wrought in the nearly seventy-year interval since that was written? How well does this description fit the present day life in the area? What has been done, what is being done, and what are future plans for the betterment of conditions among these people?

Without making any attempt to recount the history and development of various activities which have been undertaken to advance the cause of better living amongst the Chinese in San Francisco, a task beyond the limitation of this article, it is hoped that some of the answers to these queries may be found in this discussion. There is presented an analysis of certain statistical material, a detailed study of tuberculosis among the Chinese, and a compilation of the records of the Chinese Health Center which is making a definite contribution towards a solution of some of the health problems existing among these people.

The Chinatown described in the letter quoted above, in common with other sections of the city, was ravaged by fire and earthquake in 1906, and in spite of the re-building and rehabilitation that of necessity followed, there is in this area today sub-standard housing and over-crowding.

The original so-called "Chinatown" was situated in the few blocks from Kearny to Stockton Streets, between California and Jackson Streets. Expansion is restricted on three sides by the retail business section, by the commission market district, and by the North Beach area occupied largely by the Italian colony. Only on the west side could any extension of the residential

area be made and even this was limited because of the prejudice of residents in that section against Chinese occupancy. However, as white people have moved from the outskirts, property has been obtained by Chinese residents, with the result that those who can do so have found a somewhat higher standard of living. Strange as it may seem, even with the large number of families on relief, delinquency in the payment of rents is the exception rather than the rule in Chinatown. Realizing this, Chinese landlords have been quick to acquire property when vacated by white tenants and after renovation, to offer it at higher rents to the Chinese families who are able to meet the increased rental. The problem, of course, is the inability of the vast majority to meet the comparatively excessive rentals and the fact that even with this expansion, space is not provided for the proper housing of all the residents within the tenement area. The burden of solving the problem, whether as a matter of health or of civic pride, falls upon the whole community.

No satisfactory figures regarding the population are attainable. The census of July, 1930, gave a population of 16,450. The present estimate by the Department of Public Health is 17,800. This is probably conservative, for within the past two years there has been noted the continued arrival of American-born Chinese from scenes of war in China and the return of migratory Chinese from various parts of the United States. This increase in population has added yet another burden to the already heavy load carried by the agencies attempting to dispense aid and relief to the needy.

One may find in Chinatown, persons employed in many and varied occupations; professional services are furnished by physicians, dentists, teachers, ministers, attorneys, pharmacists, nurses, and others; crafts and trades are represented, as are also labor, skilled and unskilled, with scores of migratory workers employed in canneries, shrimp camps and the like. Many find employment in the Chinese laundries which are not limited to the Chinatown area but are scattered throughout the city. In the tuberculosis study included in this report, an attempt is made to show what relationship, if any, exists between that disease and the occupation of the patient.

It has been said that residents of Chinatown can, and some do, live an entire lifetime without going outside of the district boundaries. Facilities are here to satisfy every need. Food,

vegetables, meat, fish and poultry markets, general merchandise stores, cafes, theatres, churches, schools, a hospital, medical services, undertakers, all are represented, offering employment as well as giving service to this little community.

Elementary and religious Mission schools only are located in this area. For junior and senior high school work Chinese young people must attend schools in adjoining sections of the city. There are several purely Chinese schools in the district in which, under native teachers, the children learn the language, geography, history and culture of the Chinese race. The unfortunate fact that three hours of study are added to the daytime schedules (5 to 8 P.M. or 7 to 10 P.M.) constitutes a serious menace to the health of the younger children and deprives them almost completely of much needed rest and recreation.

With this glimpse into conditions surrounding them, with some slight understanding of the background upon which their daily lives are built, the analysis and interpretation of statistical data relative to births, disease and death in Chinatown may be undertaken.

A ten-year period is covered in the tabulation of births (Table I, Chart I), a period of economic depression in which many Chinese families were forced to accept public financial relief. During this time, there has been a decidedly noticeable decrease in the birth rates without the upward trend which began to show in the city-wide rates in 1935. In spite of the fact that there is in the community a hospital owned, staffed and operated by the Chinese, few non-resident Chinese women enter the hospital for delivery (Table II). The percentage of births in the non-resident group over this ten year period is negligible. The practice of employing midwives is apparently disappearing (Table III). Records show that no Chinese birth within the last six years has been attended by a midwife. Two reasons may account for this: one, that members of the younger generation are not qualifying as midwives; the other, that through the efforts of prenatal clinics many mothers are being shown the need of hospitalization and learning the advantages of medical prenatal and postnatal care.

A tangible result of effort in the education of Chinese mothers is the increase in the number of those hospitalized at the time of delivery (Table IV). In 1929, 20% of the births occurred

in hospitals, in 1938, 56%, an increase of 180% in ten years. For city-wide births, 82% of them occurred in hospitals in 1929, 92% in 1938, an increase of 12%. While some of these mothers, as cases in charity hospitals, have been sent there by the social service workers, nevertheless the important, encouraging fact remains that each year finds a greater number taking advantage of the benefits of hospital care and postnatal rest with the resultant beneficial effects upon the baby.

In the ten years for which these birth tabulations have been made (Table V), there has been a 34% decrease in the number of China-born parents. It is hoped and rather to be expected that the younger American-born parents will be found much more eager in their acceptance of the services offered them in the education of the mothers. As the older generation passes away, some of the difficulties that now confront the health workers will likewise disappear. At the present time, so much must be done to break down the barriers of racial prejudices, age-old traditions and superstitions, and language difficulties that the actual achievements in this endeavor are often quite unsatisfactory and frequently entirely discouraging to the workers.

It has been previously mentioned that except for tuberculosis one finds comparatively little spread of contagious diseases in the Chinatown area. This is truly remarkable because while living quarters give evidence of a certain amount of cleanliness, health habits, judged by hygienic standards are conspicuously absent. Principal offenses are the community kitchens and the common serving dish from which the entire family partakes of its meals.

Table VI shows the incidence of reportable diseases as recorded through the Chinese Health Center during the fiscal years July, 1932, to July, 1939, inclusive. It is evident that this district participated in the severe city-wide measles epidemic 1938-39. That the epidemic was not so extensive among the Chinese, however, is indicated by the fact that the 299 cases reported represents 9% of the elementary school enrollment, while the city-wide incidence of 10,469 cases was 19% of the city-wide enrollment in elementary schools. Again one wonders why and by what means the miracle of escape from the spread of contagious disease. In those years when the city as a whole showed increased incidence of diphtheria, scarlet fever, chicken-pox and whooping cough, the increase is noted in the

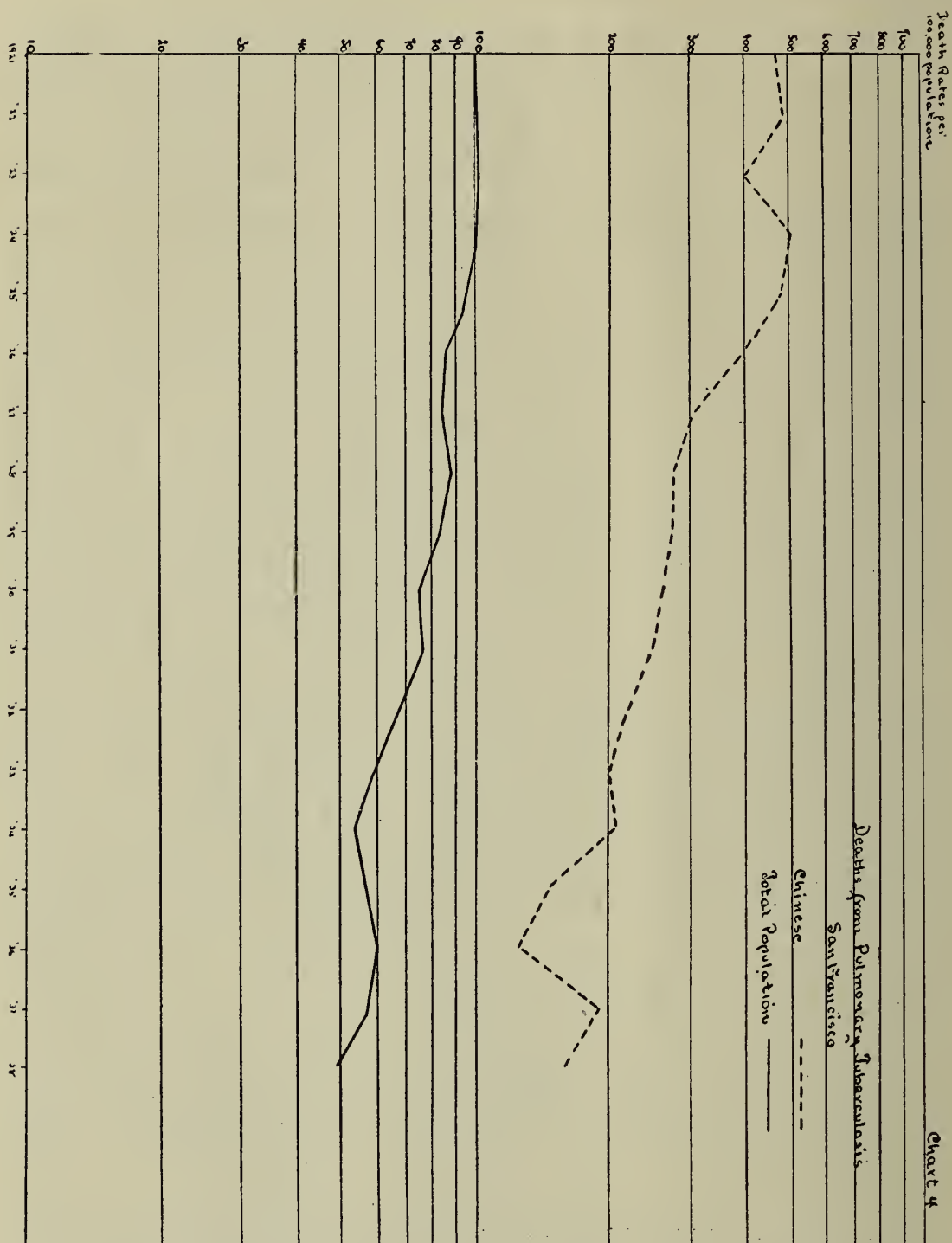
Chinese community as well. Trachoma and acute conjunctivitis are frequently found. It is of interest to note the absence of reported influenza cases.

Tuberculosis presents one of the major health problems in the Chinese area because of the crowded housing conditions and long working hours, leading to fatigue; and while the decline in the tuberculosis mortality rate follows the same downward trend as that of the population as a whole (Chart 4), the death rate from tuberculosis among the Chinese today is three times as great as that of the entire city (Table VII). Since tuberculosis is a natural corollary to substandard housing and living conditions, special effort has been made by the San Francisco Department of Public Health to produce more favorable living conditions among the Chinese as a whole and to contact the families of tuberculosis cases, examine conditions in the home and attempt to correct and improve them. To this end (and in addition to housing inspection, condemnation and improvements) a child welfare center was established in Chinatown in March of 1933, one of whose functions was, and is, to discover tuberculosis cases, see to their adequate care and to attempt to produce conditions that will prevent the spread of the disease to contacts. The families investigated are reached through death certificates, school examinations, recommendations for hospitalization by private doctors, the application of patients for examination, and through observation by the staff of the welfare center. Each contact is examined physically, a tuberculin test made and X-Rays taken if indicated either by the physical examination or a positive tuberculin test. In the matter of reporting to the Center, the cooperation of the families is good. The majority attend the clinic regularly, are willing to have defects corrected, and carry out to the best of their ability rules of hygiene as recommended by the nurse in her visits to the home. However, the housing and economic conditions of the community are such difficult problems that the instructions for the most part cannot be carried out, as to proper diet, fresh air and sunlight, and rest, when overcrowded living quarters exist.

On July 15, 1939, 392 cases of tuberculosis and 1018 contacts, a total of 1410, were under the supervision of the Center.

Because of the special interest felt in the tuberculosis problem among the Chinese, the following statistical study was made from 488 records from the Chinese Health Center, in

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which there was sufficient information to warrant inclusion in the study. There were 356 cases with contacts and 132 cases with no contacts (mostly single men) who were included because they afforded an opportunity to tabulate occupations. The two types of cases were studied separately. Percentages given are based on totals less those not stated.

SUMMARY OF TUBERCULOSIS CASES HAVING CONTACTS

In this group of data there are 356 cases having 1738 contacts. Of these contacts, 493 (28%) had positive tuberculin reactions and 170 (10%) contracted tuberculosis.

Type of Tuberculosis

In the group of 356 cases, 237 (67%) had pulmonary tuberculosis, 90 had childhood tuberculosis, 24, other forms of tuberculosis, and 5 with a type not stated. 80 (22%) died.

Age of Cases (Table "A")

251 of the cases (78%) were under 25 years of age, the greatest number, 72, being in the 10-14 group, and the next greatest, 69, in the 5-9 age group.

Source of Infection

In 251 (73%) of the families, the source of the tuberculosis was a child in the family; in 61 instances (18%) the source was the father; and in 33 instances (10%) the source was the mother.

Salary Received by the Head of the Family (Table "B")

60.7% of the families received less than \$70 per month, the highest number, 45 (20.5%) having received \$50-59.

Rent Paid (Table "C")

79% of the families paid less than \$30 rent per month, the greatest number (25%) paying \$15-19.

Type of Housing (Table "D")

36% of the families live in tenements, 28% in flats and 24% in apartments.

Number of Rooms in the Home (Table "E")

39% of the families occupy three rooms; 19% occupy two rooms.

Number of Sleeping Rooms (Table "F")

In 51% of the families there are two sleeping rooms. 93% of the families have 1 to 3 sleeping rooms. It will be noted that as the number of sleeping rooms is increased the average number of persons sleeping in them is decreased (Tables "G" and "H").

Contacts (Table "I")

Only 6% of the cases had only one contact, while 11.2% had seven contacts, 12.4% six contacts, 17.1% four contacts, &c.

TABLE "A"

Age of Tuberculosis Cases

Age	Cases	Percent in Group	Age	Cases	Percent in Group
- 5 yrs.	30	9.3	30-34	9	2.8
5- 9	69	21.4	35-39	18	5.6
10-14	72	22.4	40-44	11	3.4
15-19	50	15.5	45-49	4	1.2
20-24	30	9.4	50-54	7	2.2
25-29	18	5.6	55-59	2	0.6

Not stated 36

TABLE "B"

Monthly Salary Received by the Head of the Family

	Families	Percent
\$ 10- 19	2	0.9
20- 29	12	5.5
30- 39	19	8.7
40- 49	19	8.7
50- 59	45	20.5
60- 69	36	16.4
70- 79	23	10.5
80- 89	27	12.3
90- 99	13	5.9
100-109	12	5.5
110-119	4	1.8
120-129	6	2.7
130-139	0	0
140+	1	0.5
Not stated	137	

TABLE "C"

Rent Paid

	Families	Percent
Free	8	2.6
Under \$5 per month	2	0.7
5- 9	9	2.9
10-14	45	14.7
15-19	77	25.2
20-24	57	18.6
25-29	43	14.1
30-34	30	9.8
35-39	11	3.6
40-44	13	4.2
45+	2	0.7
Own home	9	2.9
Not stated	50	

TABLE "D"

Type of Housing

	Families	Percent
Tenement	129	36.2
Flat	100	28.1
Hotel	6	1.7
Rooming House	9	2.5
Apartment	85	23.9
Store	21	5.9
Not stated	6	1.7

TABLE "E"

Number of Rooms	Families	Percent
1	30	9.0
2	63	18.9
3	129	38.6
4	49	14.7
5	42	12.6
6	14	4.2
7	5	1.5
8	0	---
9	1	0.3
10	1	0.3
Not stated	22	

TABLE "F"

Number of Sleeping Rooms	Families	Percent	Average Number Sleeping in One Room
1	72	22.0	3.5
2	166	50.6	2.7
3	68	20.7	2.3
4	15	4.6	2.0
5	5	1.5	1.7
6	1	0.3	1.8
7	1	0.3	1.6

TABLE "G"

Sleeping Rooms in Living Quarters

Sleeping Rooms	Occupants													Total Families	Average Persons 1 Rm.
	1	2	3	4	5	6	7	8	9	10	11	12	13		
1	4	21	17	14	7	3	3	3	---	---	---	---	---	72	3.5
2	---	6	18	30	33	35	19	17	6	2	---	---	---	166	2.7
3	---	---	2	5	7	16	11	15	8	1	2	---	1	68	2.3
4	---	---	---	---	1	3	1	3	2	4	1	---	---	15	2.0
5	---	---	---	---	---	2	---	1	---	---	1	---	1	5	1.7
6	---	---	---	---	---	---	---	---	---	---	1	---	---	1	1.8
7	---	---	---	---	---	---	---	---	---	---	1	---	---	1	1.6

TABLE "H"

Total Rooms in Living Quarters

Total Rooms	Occupants													Total Families
	1	2	3	4	5	6	7	8	9	10	11	12	13+	
1	2	11	6	4	3	1	2	1	---	---	---	---	---	30
2	2	10	9	12	9	7	6	5	2	1	---	---	---	63
3	---	6	18	24	20	28	12	14	7	---	---	---	---	129
4	---	---	2	8	9	8	6	9	4	---	3	---	---	49
5	---	---	2	1	8	10	7	6	5	3	---	---	---	42
6	---	---	---	---	---	3	1	3	---	2	3	---	2	14
7+	---	---	1	---	---	1	1	1	---	---	---	1	2	7

TABLE "I"

Contacts

	Percent
24 cases had 1 contact.....	6.7
42 cases had 2 contacts.....	11.8
42 cases had 3 contacts.....	11.8
54 cases had 4 contacts.....	15.2
61 cases had 5 contacts.....	17.1
44 cases had 6 contacts.....	12.4
40 cases had 7 contacts.....	11.2
26 cases had 8 contacts.....	7.3
7 cases had 9 contacts.....	2.0
11 cases had 10 contacts.....	3.1
2 cases had 11 contacts.....	0.6
3 cases had 12 contacts.....	0.8

**SUMMARY OF 132 TUBERCULOSIS CASES HAVING
NO CONTACTS (MOSTLY SINGLE MEN)**

Type (Table "J")

95 % of the cases had pulmonary tuberculosis; 5 % had other forms. Of these, 42 (32 %) died.

Age (Table "K")

77 % of the group was under 40 years of age, the greatest number (25 %) in the 30-34 age group, and the second greatest (23 %) in the 25-29 age group.

Occupations (Table "L")

A study of the occupations listed shows that by far the greatest number (76 out of 115 cases) occur in the domestic services where the hazard for contacts is greatest.

Monthly Salary (Table "M")

55 % received less than \$60; 90 % less than \$80.

Rent (Table "N")

95 % paid less than \$15 per month rent; the greatest number (33 %) paying less than \$5.

Housing (Table "O")

52 % lived in rooming houses; 19 % in hotels and 16 % in tenements, making a total of 87 % living in these three types of dwellings.

TABLES RELATING TO THE ABOVE ON THE FOLLOWING PAGES,

TABLE "J"

TYPE OF TUBERCULOSIS		
		Percent of Total
Pulmonary	125	94.7%
Childhood	0	-----
Other	7	5.3%
Total	132	100%

TABLE "K"

Age Groups	Cases	Percent of Cases in Group
15-19	7	5.3
20-24	10	7.6
25-29	31	23.5
30-34	33	25.0
35-39	21	15.9
40-44	9	6.8
45-49	7	5.3
50-54	5	3.8
55-59	4	3.0
60-64	3	2.3
65+	2	1.5

TABLE "L"
OCCUPATIONS

Cook	26	Clerk	4
Laundry	18	Student	4
Kitchen Helper	13	Bookkeeper	3
Waiter	8	Sewing	2
Houseboy	6	Salesman	2
Beauty Shop	1	Teacher	1
Baker	1	Actor	1
Restaurant	1	Radio Repair	1
Butcher	1	Farmer	1
Cannery	1	Druggist	1
Laborer	17	Gardener	1
		Pattern maker	1

TABLE "M"
MONTHLY SALARY

Salary	Cases	Percent in Group	Salary	Cases	Percent in Group
\$ 20- 29	4	9.8	70- 79	6	14.6
30- 39	2	4.9	80- 89	2	4.9
40- 49	7	17.0	100-109	2	4.9
50- 59	10	24.4	Not stated	91	.....
60- 69	8	19.5			

TABLE "N"
RENT

Rent per Month	Cases	Percent	Rent per Month	Cases	Percent
Free	12	13.6	\$15- 19	2	2.3
- \$ 5	29	33.0	\$20- 24	1	1.1
\$ 5- \$ 9	25	28.4	\$30- 34	1	1.1
\$10- 14	18	20.5	Not stated	44	....

TABLE "O"
TYPE OF DWELLING

Type	Cases	Percent
Tenement	19	16.4
Flat	2	1.7
Hotel	22	19.0
Rooming House	60	51.7
Apartment	2	1.7
Store	8	6.9
Other	3	2.6
Not stated	16	....

A constant decline is apparent in the Chinese mortality rates over the ten year period 1929-1938 inclusive (Table VIII: Chart II) City-wide mortality rates during the same period have fluctuated and at no time have shown the gradual trend downward seen in the Chinese rates. City-wide death rates have never approximated the high of 18.1, the Chinese rate in 1929, nor declined to the low level of 9.83, the Chinese rate for 1938. The lowest city-wide rate was reached in 1934 from which point slight increases each year have occurred while the Chinese rate has continued the same steady decline seen in the first five years of the period.

Three times within the past ten years, in 1931, 1937 and 1938, the infant mortality rates (Table IX: Chart III) among the Chinese have been lower than the rates for the entire city. In all other years they have been greatly in excess. In 1936, they were exactly twice as high, 42 for the City, 84 for the Chinese. It is quite possible that the very low infant mortality rate among the Chinese for the last two years may not be further decreased nor even duplicated but with the continued program of the well-baby clinics, and uninterrupted effort towards educating the Chinese mothers, no return to the exceedingly high infant mortality rates of a few years ago is anticipated. Consistently the two ranking causes of death among the infant Chinese are bronchopneumonia and prematurity. (Table X). It is of interest to note that in 1938 when the infant mortality was rated at an all-time low, three of the four deaths that occurred were due to a single cause—whooping cough.

While the number of non-resident Chinese dying in Chinatown (Table XI) has been greatly reduced within the last ten years, the percentage still found would indicate that a considerable number of non-residents do enter San Francisco for care at the Chinese Hospital.

The tabulation of the principal causes of death among the Chinese reveals tuberculosis as the greatest offender in increasing mortality rates (Table XII). On the basis of a ten year average for the city and for the Chinese group alone, in order of frequency of occurrence for the five most important causes of death, rank has been established as follows: for the entire city, the order is heart disease, cancer, nephritis (chronic), tuberculosis (all forms) and cerebral hemorrhage. For the Chinese, the causes are listed as tuberculosis (all forms), heart disease,

nephritis (chronic only), cancer and bronchopneumonia. The large percentage of deaths from bronchopneumonia in the under-one-year group evidently has an effect in bringing this disease into fifth place of importance among the Chinese. Because tuberculosis and bronchopneumonia do take their toll so frequently in younger age groups, a question arises as to the relative age at death for city-wide and Chinese groups.

It is unfortunate that at the present time no material regarding age distribution in the Chinese population estimates is available, so no rates for various age segregations can be established. The only basis of comparability is the average age at death. This has been computed for the years 1929 and 1938, with the following result: for 1929, the average age at death for the city was 52.4 years, for the Chinese 41.7 years. For 1938 the average age at death in the city-wide group had increased to 58.3, in the Chinese group to 50.8. So it appears that the span of life has definitely lengthened in the ten-year interval, but the tabulation likewise discloses that death comes in the Chinese group at a much earlier age. An additional computation on deaths in certain age groups was made from which no definite conclusions can be drawn without the information on age distribution in the population (Table XIII). However, there is a certain interest attached to the fact that in 1929, 44% of the Chinese deaths and 25% of the city-wide deaths occurred under 40 years of age. In 1938, the Chinese groups showed 27% of the deaths at ages under 40 years, while the city-wide group indicated 14%. These figures coincide well with the statements based on average age at death.

It is not unreasonable to assume that the growth and development of public health measures have been of prime importance in these changes. There is also recognized evidence of a greater susceptibility and less resistance to disease among the Chinese in the earlier age groups than is found among the city-wide groups similarly segregated.

It is not difficult to recognize the inefficiency of scattered and sporadic effort in behalf of this community. The organization of a generalized health program in Chinatown by the Department of Public Health was an attempt to concentrate effort for the greater benefit of the district. The completion of this program was accomplished in March 1933, with the establishment of a child welfare center. There were many difficulties encountered in organizing the health program, not the least of which

were the problems of language and race. In the seven year interval since the location of a health center in Chinatown, definite progress in combating these has been made. Suspicion has given way to confidence, opposition to co-operation, indifference to interest.

The personnel of the Chinese Health Center when it was inaugurated, consisted of one supervisor, two field nurses and one physician. Office space was provided in the nurses' room at the Commodore Stockton School, and a three-sided program was carried on—tuberculosis, school and child welfare. Previously any social service rendered had been a part of the school program carried on by the school nurse.

It became apparent soon after the opening of the Center that larger quarters must be obtained but not until October, 1934, was the Health Center quartered in a building for its sole use where its activities could be carried on uninterruptedly.

Some realization of the growth of the Center may be obtained from the fact that the records show that the total attendance for the fiscal year 1933-34 to be 4,055. At the close of the fiscal year 1938-39 this figure had reached 18,863. A factor in this increased attendance was the establishment in November, 1937, of a dental clinic, a much needed service.

It is not possible to discuss fully the growth and development of this Health Center nor to present complete statistical data on its accomplishments. A study of all available records clearly demonstrates its value to the community. That its achievements justify its existence and support is obvious. Judged on the basis of attendance increase alone, there is a growing need for expansion of its activities. If this demand for increased service to the community is met, the medical personnel should be supplemented by additional nursing service, and an adequate clerical staff and provision made for the installation of sufficient working equipment, especially in the dental clinic.

Whatever statements have been made in this discussion relative to housing conditions have been confirmed by a report of the Chief Housing Inspector of the San Francisco Department of Public Health, a summary of which follows: The insanitary and unhealthful conditions already mentioned, brought about by overcrowding, insufficient sanitary facilities, such as baths and toilets, poor lighting, inadequate ventilation due to small courts and vent shafts, are further increased by lack of

janitorial service and the improper handling of garbage. Failure to dispose of garbage properly has been the cause of rat infestation with resulting property damage. For purposes of this paper, the listing of condemned property has been omitted. However, the report indicates considerable activity on the part of the Department of Public Health in condemnation of buildings unfit for occupancy. The extent of renovation, reconstruction and repair varies with the individual property and the difficulty encountered in finding temporary living accommodations for tenants forced to vacate after condemnation, retards the progress of rehabilitation. Lack of sufficient personnel does not allow for proper inspection of the district nor permit the necessary supervision of suggested reconstruction projects.

SUMMARY AND RECOMMENDATIONS

Statistics show a significant decline in both birth and death rates. Infant mortality has been reduced to an exceedingly low level after ten years of downward trend. With the exception of tuberculosis, which is still too often found in this area, other contagious diseases offer no particular problem in normal years. The problem of adequate housing is only partially solved. The need is present for additional housing supervision in the district and for further condemnation and rehabilitation of buildings in the tenement area. The work of the Health Center is an important factor in building the health of the community. All phases of its present activities should be developed and new ones added. Additional personnel should be assigned and full dental equipment installed. As the need for expansion develops, new and larger quarters should be acquired.

While housing conditions in the Chinatown area are to be deplored and the urgent need exists for better living accommodations with rents commensurate to earning power, the situation is far from hopeless. The response of the Chinese to suggestion, the adaptability of Oriental customs to Occidental living, the eager willingness of these people to participate in city-wide activities, their evident desire to be good citizens, should gain for them the interest, encouragement and aid of the whole community. None of the activities undertaken in the interests of these people should be curtailed, rather should they be extended to the end that in a few years at least, the quoted description at the beginning of this paper shall no longer be an identification of San Francisco's Chinatown.

**SUPPLEMENTARY
TABLES**

TABLE I

CHINESE BIRTHS

Year	Total	Rate Per 1000 Pop.	City-Wide Rate Per 1000 Pop.	Still- births	Twins (Sets)
1929.....	362	23.2	12.09	7	2
1930.....	382	23.2	12.34	6	3
1931.....	369	22.0	11.76	10	4
1932.....	323	19.0	11.19	7	....
1933.....	302	17.2	10.38	11	1
1934.....	279	15.8	10.43	6	....
1935.....	225	12.6	10.28	3	....
1936.....	226	12.7	10.51	3	....
1937.....	211	11.8	11.87	1	....
1938.....	214	12.02	12.28	8	2

TABLE II

RESIDENCE (Births)

Year	Resident	Non- Resident	Year	Resident	Non- Resident
1929.....	354	8	1934.....	277	2
1930.....	371	11	1935.....	222	3
1931.....	360	9	1936.....	218	8
1932.....	315	8	1937.....	206	5
1933.....	298	4	1938.....	203	11

TABLE III

ATTENDANT

Year	Physician	Midwife	Other	Year	Physician	Midwife	Other
1929.....	353	1	8	1934.....	273	....	6
1930.....	369	13	1935.....	224	1
1931.....	357	3	9	1936.....	225	1
1932.....	311	3	9	1937.....	210	1
1933.....	302	1938.....	211	3

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Chart 1

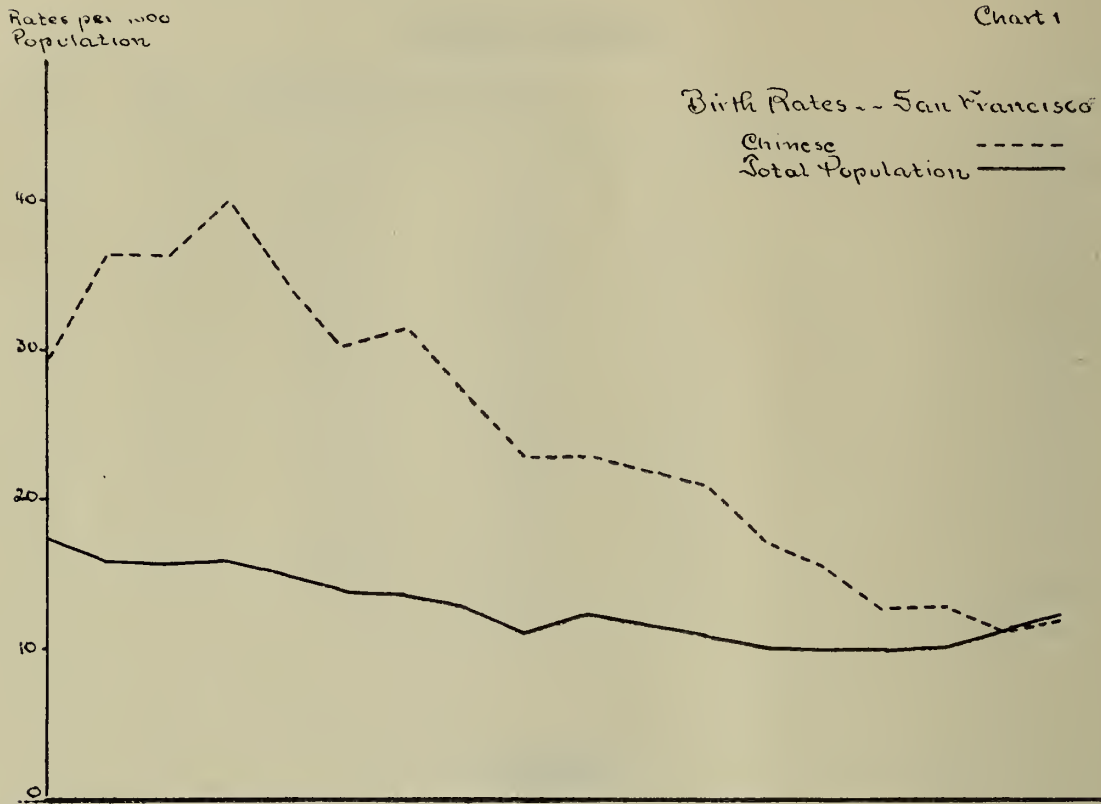


Chart 2

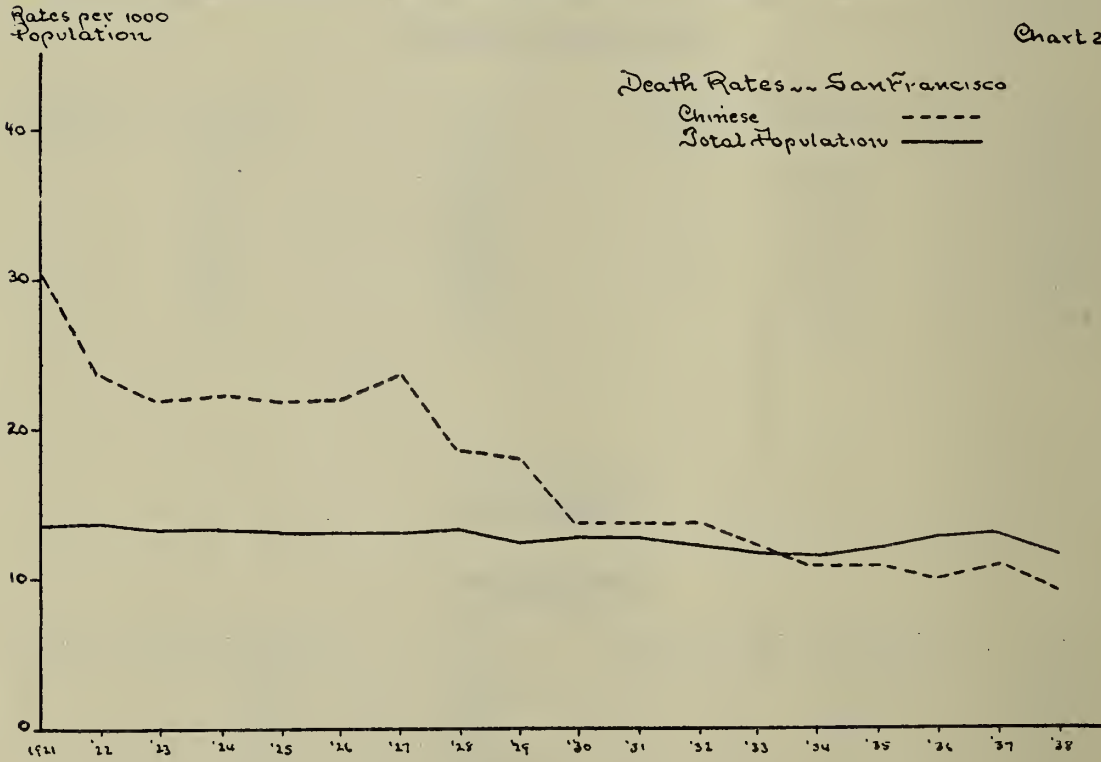


TABLE IV

HOSPITALIZATION

Year	Chinese		Home	Percent	City-Wide		Home	Percent
	Hospital	Percent			Hospital	Percent		
1929	71	20%	291	80%	6252	82%	1337	18%
1930	86	22%	295	77%	6601	84%	1299	16%
1931	83	22%	286	78%	6389	84%	1257	16%
1932	91	28%	232	72%	6243	84%	1163	16%
1933	99	33%	203	67%	5833	83%	1168	17%
1934	97	35%	182	65%	6112	85%	1047	15%
1935	94	42%	131	58%	6323	89%	799	11%
1936	106	47%	120	53%	6612	91%	673	9%
1937	103	49%	108	51%	7583	92%	640	8%
1938	120	56%	94	44%	7871	92%	638	8%

180% increase in 10 years

12% increase in 10 years

TABLE V

NATIVITY

Year	BOTH U. S.		BOTH CHINA		U. S. and CHINA		Other Total
	Total	Percent	Total	Percent	Total	Percent	
1929	44	12%	202	56%	116	32%	....
1930	48	12.5%	214	56%	118	31%	2
1931	52	14%	196	53%	119	32%	2
1932	48	14.8%	187	58%	87	27%	1
1933	44	14.6%	172	57%	85	28%	1
1934	58	20.7%	137	49%	82	29%	2
1935	38	17%	135	60%	52	23%	—
1936	43	19%	100	44%	82	36%	1
1937	44	21%	76	36%	91	43%	—
1938	34	11%	80	37%	97	45%	3

TABLE VI
COMMUNICABLE DISEASES
CASES REPORTED

Disease	Fiscal Years	1932-33	1933-34	1934-35	1935-36	1936-37	1937-38	1938-39
Measles	1	64	134	6	---	---	---	299
Diphtheria	4	1	3	1	4	---	---	2
Diphtheria Carriers	---	2	5	---	7	8	---	2
Scarlet Fever	1	53	33	15	5	2	---	29
Chickenpox	45	79	73	36	20	16	---	155
Whooping Cough	44	3	34	23	5	12	---	34
Mumps	---	291	3	13	66	1	---	188
Trachoma	---	9	1	13	4	6	---	2
Leprosy	---	1	---	2	---	2	---	1
German Measles	---	---	174	18	1	1	---	---
Impetigo	---	---	---	9	5	5	---	2
Scabies	---	---	---	7	4	---	---	3
Typhoid Fever	---	---	---	2	---	2	---	---
Paratyphoid	---	---	---	1	---	---	---	---
Conjunctivitis	---	---	---	---	2	2	---	1
Fluke	---	---	---	---	9	---	---	---
Trichuris Trichuria	---	---	---	---	1	1	---	---
Pediculosis	---	---	---	---	1	13	---	---
Cerebrospinal Fever	---	---	---	---	---	1	---	---
Ringworm	---	---	---	---	---	1	---	---

NOTE: From records of the Chinese Health Center.

TABLE VII
TUBERCULOSIS MORTALITY

Year	Chinese		Entire City	
	Deaths	Rates	Deaths	Rates
1929.....	43	276.1	522	83.2
1930.....	43	261.4	480	75.0
1931.....	41	245.4	494	76.0
1932.....	37	217.3	443	66.9
1933.....	35	199.9	401	58.9
1934.....	36	204.1	374	54.5
1935.....	26	146.0	406	58.5
1936.....	22	123.5	418	60.3
1937.....	33	185.3	398	57.43
1938.....	28	157.3	342	49.35
Rates per 100,000 population.				

TABLE VIII

MORTALITY

Year	Chinese Total Deaths	Chinese Death Rates	City-Wide Death Rates
1929.....	282	18.1	12.69
1930.....	227	13.8	12.99
1931.....	225	13.4	13.03
1932.....	233	13.7	12.35
1933.....	218	12.4	12.05
1934.....	194	10.9	11.65
1935.....	195	10.9	12.34
1936.....	179	10.0	13.01
1937.....	202	11.3	13.38
1938.....	175	9.83	12.29

Rates per 1000 population.

TABLE IX

INFANT MORTALITY

Year	Chinese		City-Wide	
	Total	Rate	Total	Rate
1929.....	26	71	378	49
1930.....	16	41	315	39
1931.....	14	37	318	41
1932.....	22	68	293	39
1933.....	20	66	275	39
1934.....	11	39	238	33
1935.....	11	48	252	35
1936.....	19	84	304	42
1937.....	6	28	268	32.6
1938.....	4	18.7	252	29.6

Rates per 1000 live births.

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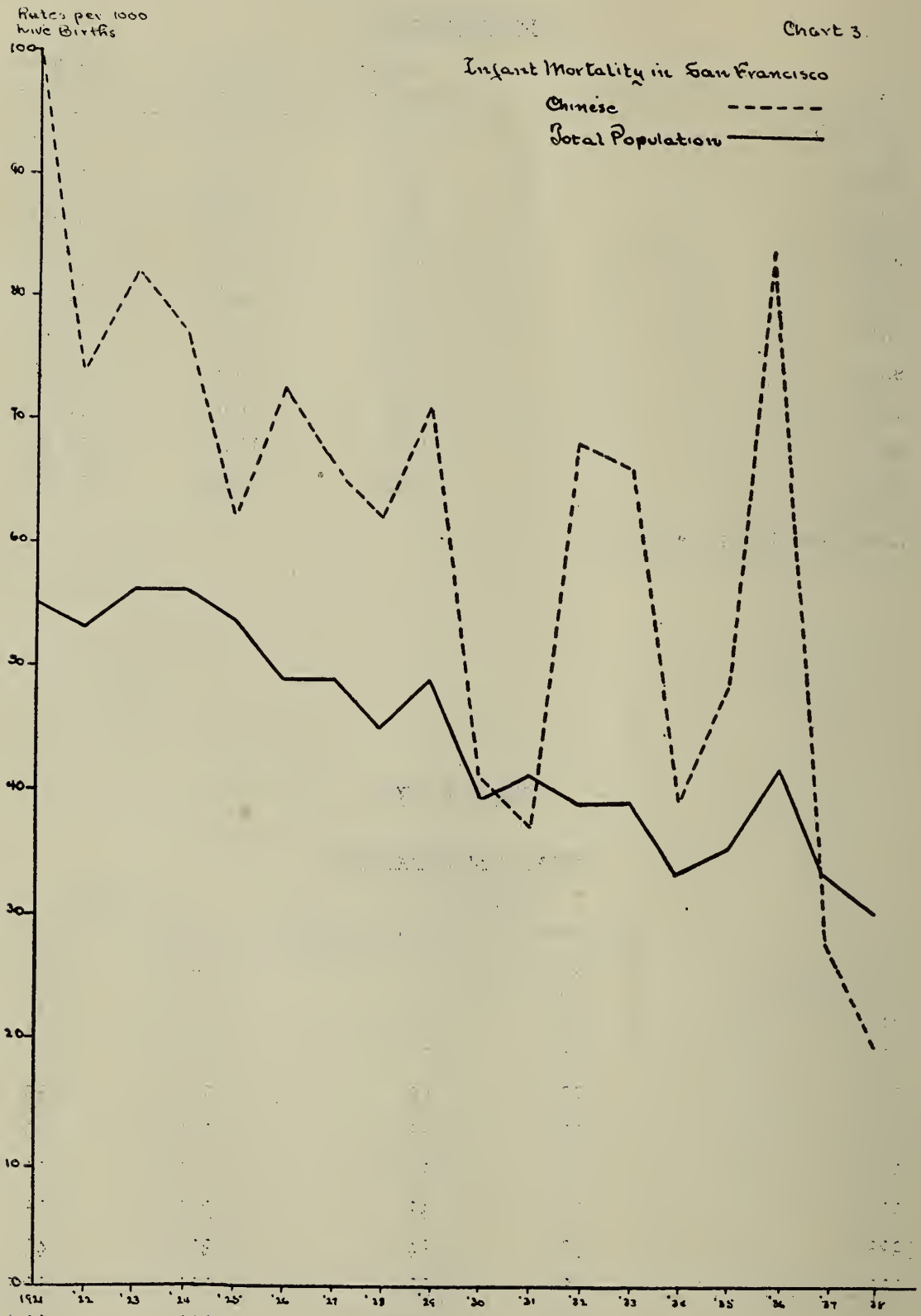


TABLE X

PRINCIPAL CAUSES INFANT MORTALITY

CHINESE

Diseases	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
Bronchopneumonia	10	3	6	4	2	5	1	5	2	---
Prematurity	4	4	3	10	6	---	5	5	1	---
Lobar pneumonia	1	1	2	---	2	1	---	1	---	---
Enteritis (-2 yrs.)	1	2	---	1	1	---	---	2	1	---
Congenital heart malformation	1	1	---	2	---	---	---	2	1	---
Whooping cough	1	---	1	---	---	---	1	---	---	3
Pulmonary tuberculosis	---	1	---	---	---	---	---	---	---	---
All other tuberculosis	2	1	---	---	---	1	---	1	---	---
All other early infancy	2	---	---	---	1	1	1	---	1	---
Injuries at birth	---	---	1	---	2	1	---	---	---	---
Other congenital malformations	---	---	---	1	---	1	1	---	---	1
Congenital debility	1	1	---	1	1	---	---	---	---	---
Otitis media	---	---	---	1	1	---	1	---	---	---
Status lymphaticus	1	---	---	---	---	---	---	1	---	---
Measles	---	1	---	---	---	---	1	---	---	---
Diseases of kidneys	---	---	---	---	1	---	---	1	---	---
All others	2	1	1	2	3	1	---	1	---	---

TABLE XI

RESIDENCE (MORTALITY)

Year	Resident	Non-Res.	Percent Non-Res.
1929.....	192	90	32%
1930.....	154	73	32%
1931.....	168	57	25%
1932.....	193	40	17%
1933.....	177	41	19%
1934.....	172	22	11%
1935.....	165	30	15%
1936.....	156	23	13%
1937.....	180	22	11%
1938.....	155	20	11%

TABLE XII

PRINCIPAL CAUSES MORTALITY

CHINESE

Disease	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
Typhoid Fever	---	1	---	---	---	1	---	---	---	1
Measles	1	1	---	---	---	1	2	---	---	---
Scarlet Fever	---	---	---	1	1	1	1	---	---	---
Whooping Cough	1	---	1	---	2	---	1	---	---	3
Diphtheria	1	---	---	---	4	---	---	1	1	1
Influenza	2	1	5	2	6	1	---	---	1	1
Epidemic Meningitis	16	---	3	---	---	---	---	---	---	---
Tuberculosis, pulm.	43	43	41	37	35	36	26	22	33	28
Tuberculosis, all other....	10	11	4	11	5	13	9	3	8	4
Syphilis	9	3	5	3	3	4	5	4	8	10
Cancer	24	20	16	22	18	17	20	15	17	16
Cerebral hemorrhage	14	8	14	12	9	8	8	7	12	13
Heart Disease	33	26	36	41	28	32	33	37	31	25
Bronchopneumonia	24	12	23	12	14	15	10	14	11	4
Lobar pneumonia	11	14	9	6	13	4	2	7	14	8
Nephritis-chronic	23	29	18	18	20	9	20	19	18	15
Puerperal causes	1	3	---	1	1	1	1	---	---	1
Suicides	7	4	3	3	4	10	6	5	8	3
Accd. deaths	5	3	3	6	3	4	4	7	4	3
Homicides	1	1	1	3	---	2	2	---	2	---
All other causes.....	56	47	43	55	52	35	45	38	34	39
Total All Causes	282	227	225	233	218	194	195	179	202	175

TABLE XIII

AGE DISTRIBUTION AT DEATH

Chinese

	Total	1929 Percent		Total	1938 Percent
Under 1	26	9%	-----	4	2%
Under 5	41	14%	-----	7	4%
5-9	8	3%	-----	1	1%
10-14	2	1%	-----	3	2%
15-19	11	4%	-----	6	3%
20-29	30	10%	-----	11	6%
30-39	31	11%	-----	20	11%
40-49	30	10%	-----	27	15%
50-59	36	13%	-----	36	20%
60-69	50	18%	-----	31	18%
70-over	43	15%	-----	33	19%
	44% under 40 yrs.			27% under 40 yrs.	
	56% over 40 yrs.			73% over 40 yrs.	

White

	Total	1929 Percent		Total	1938 Percent
Under 1	378	5%	-----	252	3%
Under 5	499	6%	-----	301	4%
5-9	81	1%	-----	22	0.2%
10-14	60	0.7%	-----	29	0.3%
15-19	111	1%	-----	72	1%
20-29	456	6%	-----	255	3%
30-39	699	9%	-----	527	6%
40-49	1051	13%	-----	1045	12%
50-59	1457	18%	-----	1656	19%
60-69	1675	21%	-----	2080	24%
70-over	1872	23%	-----	2527	30%
	25% under 40 yrs.			14% under 40 yrs	
	75% over 40 yrs.			85% over 40 yrs.	

